



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,698	06/18/2001	Yukio Tozawa	OGW-00036	8591

23353 7590 04/29/2003

RADER FISHMAN & GRAUER PLLC  
LION BUILDING  
1233 20TH STREET N.W., SUITE 501  
WASHINGTON, DC 20036

EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
----------	--------------

1733

DATE MAILED: 04/29/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Applicant(s)		
	TOZAWA ET AL.		
	Application No.	09/881,698	
Examiner	Steven D. Maki	Art Unit	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
 Period of Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

Art Unit: 1733

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan '609

2) **Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 10 lines 14-18) in view of Japan '609 (JP 9-150609).**

The admitted prior art discloses a pneumatic tire having a ribbed tread comprising circumferential main grooves whose width narrows during inflation wherein both groove walls of the main groove are inclined at 80 degrees with respect to the tread surface. The admitted prior art appears to teach that uneven wear occurs with this tire. A protrusion is not provided at the groove bottom.

As to claim 1, it would have been obvious to one of ordinary skill in the art to provide the main grooves of the admitted prior art tire such that both walls of the main groove incline outwardly and a protrusion is provided in the groove such that respective ones of the pair of sidewalls and the both groove walls are oriented parallel to each other as viewed in cross-section in view of Japan '609's suggestion to include a protrusion in a circumferential groove as shown in figure 3(B) or 3(D) to prevent deterioration of wet performance and running performance on an iced road from being increased by wear of the tire. In figure 3(B) or figure 3(D) of Japan '609, respective ones the protrusion sidewalls and the groove walls are illustrated as being oriented

parallel to each other as viewed in cross-section. Claim 1 fails to exclude the groove as having an upper section having groove walls normal to the tread surface. In other words, claim 1 fails to require outwardly inclining the groove walls from the tread surface so as to define an acute angle between the tread surface and groove wall. As to claim 6, Japan '609 suggests using a straight circumferential groove.

Kukimoto et al

3) **Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 10 lines 14-18) in view of Kukimoto et al (US 5445201) and Montagne (US 3763911).**

The admitted prior art discloses a pneumatic tire having a ribbed tread comprising circumferential main grooves whose width narrows during inflation wherein both groove walls of the main groove are inclined at 80 degrees with respect to the tread surface. A protrusion is not provided at the groove bottom. The admitted prior art appears to teach that uneven wear occurs with this tire.

As to claim 1, it would have been obvious to one of ordinary skill in the art to provide the main grooves of the admitted prior art tire such that both walls of the main groove incline outwardly and a protrusion is provided at in the groove since Kukimoto et al, also directed to a pneumatic tire having a ribbed tread comprising circumferential main grooves, suggests providing the main groove such that both groove walls are outwardly inclined and a ribbed shaped protrusion (stepped zone) is located in the groove (e.g. figure 22b, 23b) *so that the tire has excellent uneven wear resistance.*

Furthermore, it would have been obvious to provide the sidewalls of the protrusion and the groove walls of the groove such that respective ones the protrusion sidewalls and the groove walls are oriented parallel to each other as viewed in cross-section since (a) Kukimoto et al, directed to preventing wear, suggests *outwardly inclining the protrusion sidewalls and the groove walls* such that respective ones of protrusion sidewalls and groove walls are inclined in the same direction and (b) Montagne, directed to preventing wear, suggests *outwardly inclining "first sidewalls" of a pair of protrusions and the groove walls* such that respective ones of the "first sidewalls" of the protrusions and the groove walls are inclined in the same direction and parallel to each other; it being noted that (1) in Montagne, the "first sidewalls" of the protrusions are defined by narrow grooves 24 which *undercut* ribs and (2) in Kukimoto et al the walls of the protrusion are defined by relatively narrow grooves 41 which *undercut* ribs. No unexpected results of preventing uneven wearing over Kukimoto et al have been shown. In particular, no unexpected results for parallel respective ones of sidewalls and groove walls (in contrast to non-parallel respective ones of sidewalls and groove walls) have been shown.

As to claims 2 and 3, the limitation of the height difference being 0-2 mm (claim 2) / protrusion height being at least 80% of groove depth (claim 3) would have been obvious in view of Kukimoto et al's teaching to locate the top of the protrusion (stepped zone) slightly below the tread surface so that the stepped zone, which may define a height difference of 2 mm, contacts the road so as to serve as an uneven wear sacrificed portion.

As to claim 4, it would have been obvious to divide the protrusion as claimed in view of (a) Kukimoto et al's teaching to use a stepped zone in a groove having outwardly inclined groove walls (e.g. figure 22b, 23b), (b) Kukimoto et al's teaching that the stepped zone may be divided (e.g figure 18b) so as to define a pair of protrusions and (b) Montagne's teaching to use a pair of protrusions in a groove having outwardly inclined walls which are parallel to respective walls of the protrusions.

As to claim 6, the limitation of the main groove being straight would have been obvious in view of Kukimoto et al's teaching to use a straight groove as an alternative to a zigzag groove.

**4) Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 10 lines 14-18) in view of Kukimoto et al (US 5445201) and Montagne (US 3763911) as applied above and further in view of Japan '906 (JP 4-274906) and / or Constantakis et al (US 2708957).**

As to claim 4, it would have been obvious to divide the protrusion as claimed in view of (a) Kukimoto et al's teaching to divide (albeit in the circumferential direction) the rib shaped protrusion (stepped zone) in the groove using slits and (b) Japan '906's teaching to divide a protrusion in a groove with a narrow groove 12 to prevent wet traction lowering at the latter half of the wear of the tread and / or (b) Constantakis et al's teaching to orient slits for improving antiskid / traction in the circumferential direction so as to axially divide the rib.

Art Unit: 1733

5) **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 10 lines 14-18) in view of Kukimoto et al (US 5445201) and Montagne (US 3763911) as applied above and further in view of Overman (US 2254622).**

As to claim 5, it would have been obvious to use protrusion composition different from the tread composition for the rib shaped protrusion suggested by Kukimoto et al in view of Overman's suggestion to use different compositions for main ribs (black) and lower height ribs (white) to present a pleasing color effect.

#### Remarks

6) Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 2-20-03 have been fully considered but they are not persuasive.

Applicant argues that the applied art fails to teach a protrusion dividing a groove space in a tire width direction provided at the groove bottom and the protrusion has a pair of sidewalls and respective ones of the pair of sidewalls and both groove walls are oriented parallel to each other as viewed in cross-section. In response, the examiner directs applicant's attention to either the newly applied Japan '609 or the newly applied Montagne (each of these references teaching an outwardly inclined groove wall and a protrusion sidewall being oriented parallel to each other).

Applicant argues that with the claimed structure, it is possible to effectively suppress generation of uneven wear otherwise likely in the vicinity of or about the main

Art Unit: 1733

groove. First and with respect to the use of Japan '609, applicant's arguments are not commensurate in scope with the claims and therefore are not persuasive since the results relating to uneven wear in the example specification are for a tire having main grooves as shown in figure 1 - these grooves but not the claimed grooves being straight and having groove walls which are outwardly inclined from the tread surface so as to define an acute angle between the tread surface and groove wall. Second and with respect to Kukimoto et al, prevention of wear is the expected result.

7) No claim is allowed.

8) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



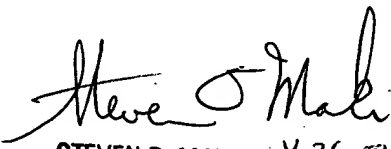
Art Unit: 1733

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki  
April 26, 2003

  
STEVEN D. MAKI 4-26-03  
PRIMARY EXAMINER  
~~GROUP 1300~~  
AU 1733